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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,998	03/09/2006	Hiroo Muramoto	20241/0207047-US0	1278

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EXAMINER

BERNSHTEYN, MICHAEL

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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02/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/571,998	Applicant(s) MURAMOTO ET AL.	
	Examiner MICHAEL M. BERNSHTEYN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9,10,25,26,33,34,56,77,96 and 97 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9,10,25,26,33,34,56,77,96 and 97 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1,9,10,25,26,33,34,56,77,96 and 97 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/09/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action follows a response filed on February 9, 2009. No claims have been amended or added; claims 51, 53, and 74-76 have been cancelled (see Office Action dated December 15, 2008).
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on February 9, 2009 has been entered.
3. Prosecution on the merits of this application is reopened on claims 1, 9, 10, 25, 26, 33, 34, 56, 77, 96, and 97 considered unpatentable for the reasons indicated below.
4. Claims 1, 9, 10, 25, 26, 33, 34, 56, 77, 96, and 97 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 56 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 56 recites the limitation "C11" in line 1. There is insufficient antecedent basis for this limitation in the claim because the independent claim 56 does not contain any description of C11.

Claim Rejections - 35 USC § 102

6. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.

7. Claims 1, 9, 10, 25, 26, 33, 34, 56, 77, 96, and 97 are rejected under 35 U.S.C. 102(b) as being anticipated by Konno et al. (JP 11-240998).

With regard to the limitations of claims 1, 9, 10, 25, 26, 33, and 34, Konno discloses a block copolymer composition which contains a block copolymer comprising a segment A containing 10-100 mol.% of a polar monomer selected from a polar monomer 1 having (1) a polymerizable unsaturated bond and a functional group selected from hydroxy group, nitrile group, carboxyl group, amino group and amide group, a polar monomer 2 represented by the formula $\text{CH}_2=\text{CR}_1\text{-COO-(CH}_2\text{-CHR}_2\text{-O)}_t\text{-R}_3$ [R₁ and R₂ are each hydrogen atom or a 1-5C alkyl group; R₃ is a 1-5C alkyl group or phenyl group; (t) is a number of repetition and an integer of 1-25] and a polar monomer 3 represented by the formula $\text{CH}_2=\text{CR}_4\text{-COO-(C}_m\text{H}_{2m}\text{-COO)}_n\text{-R}_5$ [R₄ is a 1-5C alkyl group; R₅ is a 1-10C alkyl group or phenyl group; (n) and (m) are each a number of repetition and an integer of 1-20] as constituent components and a segment B containing <10 mol.% of the polar monomer as a constituent component and (2) an ester compound (abstract).

It is noted that the polar monomer 1 is substantially identical to the claimed repeating units represented by Formula (II), and the polar monomer 2 is substantially identical to the claimed repeating units represented by Formula (I).

Konno discloses that to use the block copolymer as a solid electrolyte in electrochemical devices, such as a lithium secondary battery, it is necessary to add an electrolyte (salt). Although the electrolyte concerned changes with uses of the solid electrolyte to manufacture, for example, when the application to a lithium secondary battery is taken into consideration, as a desirable electrolyte, LiClO_4 , LiAlCl_4 , LiBF_4 , LiPF_4 , LiNbF_6 , LiAsF_6 , LiSCN , etc. (page 14, [0076]).

With regard to the limitations of claims 56, 77, 96 and 97, Konno discloses that the (B)-(A)-(C) block copolymer which consists of a taper block segment (it is written as C.) in which the content of the polar monomers 1-3 decreases gradually is also preferred at segment A (A), and a segment (B) and within the limits below 10 mol %. It is desirable even if it is the (B)-(A)-(B) block copolymer etc. which consist of segment B (B), and segment A (A) and segment B (B) in this order. Above-mentioned (A)-(B) block copolymer, (B)-(A)-(C) block copolymer, considering it as the block copolymer which extended or branched also has a preferred segment which is expressed with the general formulas (3) - (5) via the residue of a coupling agent, respectively in (B)-(A)-(B) block copolymer (pages 8-0, [0047], [0048]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/
Examiner, Art Unit 1796

/M. M. B./
Examiner, Art Unit 1796